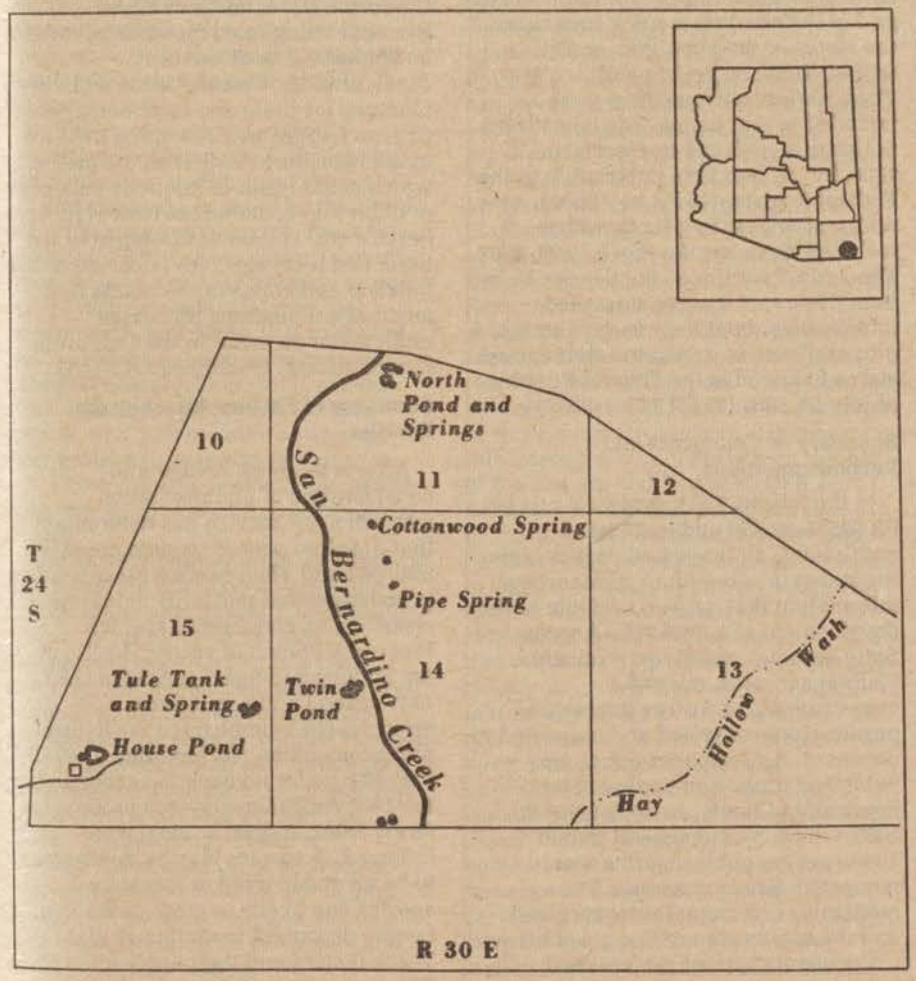
BEAUTIFUL SHINER

YAQUI CATFISH

YAQUI CHUB

Cochise County, ARIZONA



* * * * *

6. Amend § 17.44 by adding a new paragraph (h) to read as follows:

§ 17.44 Special rules—fishes.

* * * * *

(h) Yaqui catfish (*Ictalurus pricei*) and beautiful shiner (*Notropis formosus*).

(1) All provisions of § 17.31 apply to these species, except that they may be taken for educational, scientific, or conservation purposes in accordance with applicable Arizona State laws and regulations.

(2) Any violation of State law will also be a violation of the Endangered Species Act.

Dated: August 6, 1984.

G. Ray Arnett,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 84-22933 Filed 8-30-84; 8:45 am]

BILLING CODE 4310-55-M

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for Thelypodium stenopetalum (slender-petaled mustard) and Sidalcea pedata (pedate checker-mallow)

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines *Thelypodium stenopetalum* (slender-petaled mustard) and *Sidalcea pedata* (pedate checker-mallow) to be endangered species. This action is being taken because over 85 percent of the historic meadowland habitat for these plants has been eliminated by dam construction and urban and commercial development. Most of the remaining habitat in their limited range is subject to development and/or adverse modification. The designation of these species as endangered provides the protection of the Endangered Species Act of 1973, as amended.

EFFECTIVE DATE: The effective date of this rule is October 1, 1984.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service Office, Suite 1692, Lloyd 500 Building, 500 N.E. Multnomah Street, Portland, Oregon 97232 (503/231-6131).

FOR FURTHER INFORMATION CONTACT: Mr. Sanford R. Wilbur, Endangered Species Specialist, Regional Office, U.S. Fish and Wildlife Service, Suite 1692, Lloyd 500 Building, 500 N.E. Multnomah Street, Portland, Oregon 97232 (503/231-6131).

SUPPLEMENTARY INFORMATION:

Background

Sidalcea pedata (pedate checker-mallow) is a multi-stemmed, perennial herb of the mallow family. Asa Gray first described this species in 1887 from "Bear Valley in the San Bernardino Mountains, southern California." It grows from a fleshy taproot. The leaves are predominately basal with 3-5 lobes. The few cauline leaves are three-parted, each part biternately dissected into linear segments. The flowers are clustered into loosely spicate racemes

up to 25 cm long with deep pinkish-rose petals. *Thelypodium stenopetalum* (slender-petaled mustard) is an herbaceous short-lived perennial. Sereno Watson described this mustard in 1887 from "Bear Valley, San Bernardino Mountains, on stony hillsides near the upper lake." It has simple decumbent to subdecumbent stems 3–8 dm tall. The cauline leaves are oblong-lanceolate, 1–5 cm long, 0.5–0.9 cm wide and sagittate at the base. The inflorescence is a 1–2 dm long raceme. The flower petals are mostly lavender or whitish and crisped above. The sessile fruits are straight or slightly incurved, 3–5 cm long and ascending. Both of these plant species are localized in the moist alkaline meadows of the Big Bear Basin of San Bernardino County, California.

Although these species were once more abundant locally, the impoundment of Big Bear Lake in the late 1800's and subsequent urbanization have eliminated nearly all of the natural meadowlands of Big Bear Valley, an estimated reduction from more than 7,000 acres to about 1,000 acres. Most of the known stands of checker-mallow and mustard plants were destroyed by these activities. Almost all of the former wet meadow habitats necessary to the continued existence of these species have been eliminated. Both species now exist as very reduced populations having severly restricted distributions.

Studies supported by the U.S. Forest Service (Krantz, 1979) and later studies (Krantz, 1982) have estimated total occupied acreage for the pedate checker-mallow (including scattered residual plants) at about 14.5 acres. Total acreage of slender-petaled mustard populations has been estimated at approximately 16 acres divided among six sites in four general areas (Krantz, 1979, 1980, 1982).

At present the pedate checker-mallow remains in significant numbers only at three locations near Bluff Lake, Baldwin Lake, and the south shore of Big Bear Lake, all of which are under private ownership. Scattered individuals can also be found in a few other areas, mostly vacant lots or remnant meadows surrounded by housing or commercial developments. Such scattered plants apparently do not reproduce and are expected to die out.

The slender-petaled mustard is now known from only four locations, the south shore of Big Bear Lake, near Baldwin Lake, near Erwin Lake, and in Holcomb Valley. The first three are privately owned and under consideration for additional development. The fourth site, Holcomb Valley on National Forest land, was threatened by off-road vehicle (ORV) use. The Forest Service is aware of this population and has implemented protective measures at the site.

Section 12 of the Endangered Species Act of 1973 directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct. This report, designated as House Document No. 94–51, was presented to Congresss on January 9, 1975. On July 1, 1975, the Service published a notice in the **Federal Register** (40 FR 27823) of its acceptance of the report as a petition within the context of section 4(c)(2) of the 1973 Act, and of its intention thereby to review the status of the plant taxa named within. *Sidalcea pedata* and *Thelypodium stenopetalum* were included in that notice. The July 1, 1975, notice was replaced on December 15, 1980, by the Service's publication in the **Federal Register** (45 FR 82479) of a new notice of review for plants, which included these species. On July 28, 1982, Tim Krantz petitioned the Service to list both these species, and furnished information about their current status. A proposed rule to determine endangered status followed in the **Federal Register** of July 15, 1983 (48 FR 32522–32525).

Summary of Comments and Recommendations

In the July 15, 1983, proposed rule (48 FR 32522–32525) and associated notifictions, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. A newspaper notice was published in the Sun paper of San Bernardino County on September 9, 1983, which invited general public comment. No public hearing was requested. Seven responses (six containing comments) were received, and the comments are discussed below.

Comments by four professional botanists and one geologist strongly supported the listing of both plant species. A botanist with a State native plant society indicated that habitat conditions have deteriorated further since the status surveys of 1978–80. A university botanist also mentioned additonal documented habitat loss and present peril of these plants. A representative of a botanical journal pointed out that mountain meadows tend to be fragile and to recover their full floristic complement quite slowly after being overused. He considered protection of such areas to be essential. A professional geologist discussed the distinctive "pavement" soil profile in the Big Bear area and its concomitant unique flora. Because deep disturbances of the soil profile can permanently destroy the pavement habitat, he suggested that other rare pavement endemics be listed as well. No particular species were named by this commentor, but the Service presently has several species restricted to that general area under review, and would appreciate additional information regarding any of them.

An additional comment by the California Department of Water Resources suggested that critical habitat be designated to allow early consideration of these species in future planning for State and local activities. Critical habitat was not designated to avoid focusing attention on the plants, which could result in injurious collection or other taking activities. However, the Service will endeavor to keep affected State and local agencies informed of the location and status of the plants that might affect planning processes undertaken pursuant to the California Environmental Quality Act (CEQA).

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Sidalcea pedata* (pedate checker-mallow) and *Thelypodium stenopetalum* (slender-petaled mustard) should be classified as endangered species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; under revision to accommodate the 1982 Amendments—see proposal at 48 FR 36062, August 8, 1983) were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Sidalcea pedata* A. Gray (pedate checker-mallow) and *Thelypodium stenopetalum* Watson (slender-petaled mustard) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* These two plant species are both restricted in range to the few remaining wet alkaline meadows of the Big Bear Lake Basin. Both species occur in very low numbers and most of the wet meadows necessary for their continued existence have been eliminated by urban and commercial developments. About 80 percent of the

remaining habitat is subject to development, much of it anticipated in the next few years. In a few areas, off-road vehicle activity has also eliminated colonies and damaged habitat.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* Not applicable to either of these species.

C. *Disease or predation.* Historically, cattle grazing in the Big Bear Lake basin probably affected the species composition of many of the meadow areas formerly supporting these plants. A few of the remaining colonies of both species still suffer possible adverse impacts from cattle grazing, but this threat appears less imminent than the development threats mentioned in Factor A above.

D. *The inadequacy of existing regulatory mechanisms.* Although the pedate checker-mallow and slender-petaled mustard are listed by the State of California as endangered, State law principally addresses salvage of plants when there is a change in land use and restrictions on trade, and does not provide sufficient protection to ensure survival of the species in its natural habitat. Federal listing would provide some additional protection for both species, and provide new options for their protection and management.

E. *Other natural or manmade factors affecting its continued existence.* None known.

The Service has carefully assessed the best scientific information available regarding the past, present, and future threats faced by these species in determining to make this rule final. Based on this evaluation, the preferred action is to list the pedate checker-mallow and the slender-petaled mustard as endangered. Urban and commercial development threaten to eliminate wet meadow habitats that support the plants. These listing actions will increase the protection of both plant species. Critical habitat is not being designated for either species because it may focus attention on the plants and might encourage taking.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that, to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for these species at this time. All known colonies of pedate checker-mallow and all but one colony of slender-petaled mustard occur on private lands, where direct Federal involvement is minimal. Critical habitat designation would probably focus attention upon the listed plants and their rare and vulnerable status, and might encourage collection for private or commercial purposes. The danger thus posed to these species by the designation of critical habitat outweights the minimal protections that would be provided.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that conservation actions be carried out for all listed species. Such actions are initiated by the Service following listing.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 and are now under revision (see proposal at 48 FR 29990; June 29, 1983). Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. Some consultation involving actions on Forest Service lands is anticipated. A consultation will be conducted for issuance of a special use permit for a permanent pipeline carrying wastewater from the Big Bear Basin to Lucerne Valley that now crosses Forest Service property. No other actions are presently known that would require a consultation under section 7.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62, and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plant species. With respect to the pedate checker-mallow and slender-petaled mustard, all trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, or sell or offer for sale this species in interstate or foreign commerce. The Act and 50 CFR 17.62 and 17.63 also provide for the issuance of permits to carry out otherwise prohibited activites involving endangered species under certain circumstances. It is anticipated that few trade permits will ever be sought or issued since these species are not common in cultivation or in the wild.

Section 9(a)(2)(B) of the Act, as amended in 1982, prohibits the removal and reduction to posession of endangered plant species from areas under Federal jurisdiction. The new prohibition now applies to the slender-petaled mustard on U.S. Forest Service lands in the Holcomb Valley. Proposed regulations implementing this prohibition were published on July 8, 1983 (48 FR 31417). Permits for exceptions to this prohibition are available through section 10(a)(1)(A) of the Act. It is anticipated that few permits for the removal and reduction to possession of the species will ever be requested. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, D.C. 20240 (703/235–1903).

The Service will review these species to determine whether they should be placed upon the Annex of the Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere, which is implemented through section 8(A)(e) of the Act, and whether they should be considered for other appropriate international agreements.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined in regulations implementing the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

Literature Cited

Krantz, T.P. 1979. A botanical investigation of *Sidalcea pedata*. Prepared for the San Bernardino National Forest. 24 pp. unpubl. rept.

Krantz, T.P. 1980. *Thelypodium stenopetalum*, the slender-petaled mustard: a botanical survey of the species throughout its range.

Prepared for the San Bernardino National Forest. 43 pp. + appendices, unpubl. rept.
Krantz, T.P. 1982. Petition for listing as Endangered-*Sidalcea pedata* and *Thelypodium stenopetalum*. Petition to U.S. Fish and Wildlife Service, dated 22 July 1982. 10 pp.

Authors

The primary authors of this rule are Mr. Monty D. Knudsen and Dr. Kathleen E. Franzreb, U.S. Fish and Wildlife Service, Sacramento Endangered Species Office, Sacramento, California (916/440–2791). Dr. George E. Drewry of the Service's Washington Office of Endangered Species served as editor.

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulations Promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

1. The authority citation for Part 17 reads as follows:

Authority: Pub. L. 93–205, 87 Stat. 884; Pub. L. 94–359, 90 Stat. 911; Pub. L. 95–632, 92 Stat. 3751; Pub. L. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. Amend § 17.12(h) by adding the following, in alphabetical order by family and genus, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
* *	*	*	*	*		*
Brassicaceae—Mustard family:						
* *	*	*	*	*		*
Thelypodium stenopetalum	Slender-petaled mustard	U.S.A. (CA)	E	158	NA	NA
* *	*	*	*	*		*
Malvaceae—Mallow family:						
* *	*	*	*	*		*
Sidalcea pedata	Pedate checker-mallow	U.S.A. (CA)	E	158	NA	NA
* *	*	*	*	*		*

Dated: August 6, 1984.

G. Ray Arnett,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 84–23156 Filed 8–30–84; 8:45 am]

BILLING CODE 4310–55–M

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Final Rule To Deregulate the Bahama Swallowtail Butterfly and To Reclassify the Schaus Swallowtail Butterfly From Threatened to Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service make a final determination to remove the Bahama swallowtail butterfly (*Heraclides (Papilio) andraemon bonhotei*) from the U.S. List of Endangered and Threatened Wildlife, and to reclassify the Schaus swallowtail butterfly (*Heraclides (Papilio) aristodemus ponceanus*) from threatened to endangered status. The action is taken under the authority of the Endangered Species Act of 1973, as amended. Both species occur in Dade and Monroe Counties, Florida, and were listed as threatened species in 1976. A recent review of the status of each of these species indicates that the Bahama swallowtail is only a sporadic resident of the United States. It is not subspecifically distinct from the non-threatened Bahaman population of this species and does not presently qualify for listing under the Endangered Species Act, as amended. The Schaus swallowtail has declined in numbers and range since the time of its listing. This action is consistent with a petition filed with the Service on March 9, 1983, by the Florida Game and Fresh Water Fish Commission, and also follows the recommendations of the approved Schaus swallowtail butterfly recovery plan. This rule removes the protection of the Endangered Species Act from the Bahama swallowtail, and affords the Schaus swallowtail the protection of endangered status. Neither species remains eligible for a special rule at 50 CFR 17.47 that permits non-commercial take of adults, so that special rule is deleted.

EFFECTIVE DATE: The effective date of this rule is October 1, 1984.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours (7:00 a.m.–4:30 p.m.) at the Service's Endangered Species Field Station, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207.

FOR FURTHER INFORMATION CONTACT: Mr. David J. Wesley, Endangered Species Field Supervisor, at the above address (904/791–2580 or FTS 946–2580).

SUPPLEMENTARY INFORMATION:

Background

The Bahama (*Heraclides (Papilio) andraemon bonhotei*) and Schaus (*Heraclides (Papilio) aristodemus ponceanus*) swallowtail butterflies are representatives of tropical species which reach their northern limits of distribution in southern Florida. The Bahama swallowtail was described by Sharpe in 1900. It has dark brown wings with a median yellow band and has two pairs of tails on the hindwings. The Schaus swallowtail was described by Schaus in 1911. Adults have blackish-brown wings with broad rusty patches under the hindwings. Only one pair of tails is present. The primary food of the larval Schaus swallowtail is torchwood (*Amyris elemifera*), while the larval Bahama swallowtail feeds on key lime (*Citrus aurantifolia*) and various *Ruta* and *Xanthoxylum* species.

The Bahama swallowtail has been recorded from Miami and Elliott Key, Dade County, and from Key Largo and Long Key, Monroe County. Most of the records are from Elliott Key. The best available evidence indicates that this species is not a permanent resident of the U.S., nor is it subspecifically distinct from the resident *Heraclides andraemon bonhotei* population in the Bahamas. This species has occasionally reproduced in the U.S., but apparently soon dies out. The most recent known breeding in the U.S. was on Elliott Key in 1972 (U.S. Fish and Wildlife Service, 1982).

The Schaus swallowtail originally occurred from the Miami area south through the Florida Keys as far as Lower Matecumbe Key. The last records from Miami were in 1924. Presumably, urban development eliminated the habitat of the species there. The last records for Upper and Lower Matecumbe Keys were in the mid-1940's.

The disappearance of the species from these Keys apparently coincided with heavy collecting pressure, although collecting is not known to have caused the decline. In the early 1970's, the butterfly was relatively abundant on north Key Largo, but appears to be rare there now. The known range of the Schaus swallowtail is now Elliott and Old Rhodes Keys in Biscayne National Park, Dade County, and north Key Largo, Monroe County (Loftus and Kushlan, 1982; U.S. Fish and Wildlife Service, 1982).

Both the Bahama and Schaus swallowtail butterflies are restricted to tropical hardwood hammocks, which constitute the climax vegetation of upland areas in the Florida Keys. Formerly, this vegetation type occurred more widely in south Florida, but has been largely eliminated on the mainland. The hammocks are closely related floristically to the West Indies, and constitute the only tropical upland

plant community found in the continental U.S. The Florida Keys contain the largest remaining hammocks, but many of the areas are highly subject to development pressures because of restrictions on development in the surrounding lowland (mangrove) areas. Local, State, and Federal laws presently limit development on these wetlands. The hammocks contain a large number of plant species rare to Florida, many of which are considered threatened or endangered by this State. The tropical hardwood hammock plant community is considered to be one of the most restricted and vulnerable habitat types in the U.S.

Both butterflies were proposed for listing as federally threatened on April 22, 1975 (40 FR 17757). The proposal was made final on April 8, 1976 (41 FR 17736). The final regulation included a special rule at 50 CFR 17.47(a) exempting both species from some of the protective provisions available to threatened species under 50 CFR 17.31. Non-commercial take of adults was allowed, provided that other local, State, and Federal regulations were complied with. Chapter 39–27 of the Florida Administrative Code, however, presently lists the Bahama and Schaus swallowtail butterflies as threatened, and prohibits take, possession, sale or transport of all life stages of these species, except by permit. The Federal special rule is superseded by Florida State legislation, because the special rule allows take of adults only where the take would be in compliance with all other local, State, and Federal regulations. Section 6(f) of the Endangered Species Act allows State taking prohibitions to be more restrictive than those imposed by the Act or its implementing regulations.

Section 4(c)(2) of the Endangered Species Act, as amended, requires that a 5-year review of the List of Endangered and Threatened Wildlife be carried out to determine whether any species should be removed from the list or changed in status. A 5-year review notice for the Bahama and Schaus swallowtail butterflies was published by the Service in the February 27, 1981, **Federal Register** (46 FR 14652).

At the time the Bahama swallowtail was listed, the Endangered Species Act allowed protection for distinct population segments of all types of wildlife. The 1978 Amendments to the Act restricted protection at the population level to vertebrates. Since the U.S. populations of the Bahama swallowtail are not subspecifically distinct from the Bahaman populations, and since the subspecies *bonhotei* is not in danger of extinction throughout all or a significant portion of its range, the Act, as amended, requires that this species be removed from the List of Endangered and Threatened Wildlife.

The Florida Game and Fresh Water Fish Commission recently carried out research on the status of the Bahama and Schaus swallowtail butterflies. The studies were funded in part with funds provided by the Service under Section 6 of the Endangered Species Act. The results of this research were incorporated into a recovery plan for the Schaus swallowtail butterfly, including recommendations for the Bahama swallowtail (U.S. Fish and Wildlife Service, 1982). The plan recommended that the Bahama swallowtail be delisted, and that the Schaus swallowtail be reclassified from threatened to endangered, based on its decline in numbers and distribution.

In a petition dated February 23, 1983, and received March 9, 1983, the Florida Game and Fresh Water Fish Commission requested that the Schaus swallowtail be reclassified as an endangered species. An administrative finding that the requested action might be warranted was made on May 9, 1983.

On August 29, 1983, the Service published in the **Federal Register** (48 FR 39096) a proposal to delist the Bahama swallowtail and to reclassify the Schaus swallowtail butterfly from threatened to endangered. Publication of this proposed rule signified that the requested action was warranted, and constituted a required finding in accordance with section 4(b)(3)(B)(ii) of the Act as amended in 1982.

Summary of Comments and Recommendations

In the August 29, 1983, proposed rule (48 FR 39096) and associated notifications, all interested parties were requested to submit factual reports or information which might contribute to the development of a final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices were published in the Miami, Florida, *Herald* on September 25, 1983, and in the Tavernier, Florida, *Keynoter* on September 22 and 29, 1983; general comment on the proposal was invited. Eight comments were received.

Florida's Department of Natural Resources (Division of Parks and Recreation) and Department of Agriculture and Consumer Services (DACS) supported the proposals. DACS noted, however, that *Heraclides aristodemus* specimens from Andros Island in the Bahamas appeared to be indistinguishable from those in the Florida Keys. Bahaman populations of *Heraclides aristodemus* are presently ascribed to the subspecies *driophilus*. Another commenter, a lepidopterist, also supported the proposal. He indicated that there was evidence that the Cuban population of *Heraclides ponceanus* (presently ascribed to the subspecies *telmenes*), might also be identical to the Florida populations of *ponceanus* but that there is not presently sufficient data to substantiate this. The Service responds that, with respect to the taxonomic status of *Heraclides aristodemus*, the current scientific literature considers *Heraclides aristodemus ponceanus* to be restricted to the Keys of Monroe and Dade Counties, Florida. If at any time revisionary work were to indicate that *ponceanus* should be synonymized with one or more of the other subspecies of *Heraclides aristodemus*, the Service would review the status of the Schaus swallowtail with respect to section 4(a) of the Endangered Species Act. If the taxon were not in danger of extinction throughout all or a significant portion of its range, or likely to become endangered in the foreseeable future, it would no longer qualify for the protection of the Endangered Species Act. For example, if the butterfly were determined to be widespread and abundant in Cuba and the Bahamas, with no serious threat to its continued existence on these islands, the Florida population would not be eligible for the protection of the Act.

Support for the proposals was also received from the Florida Natural Areas Inventory, the National Park Service (Biscayne National Park), the International Union for Conservation of Nature and Natural Resources (Conservation Monitoring Centre) and two private citizens.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the Bahama swallowtail should be removed from the U.S. List of Endangered and Threatened Wildlife, and that the Schaus swallowtail butterfly should be reclassified from threatened to endangered status. Procedures found at Section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; under revision to accommodate the 1982 Amendments to the Act—see

proposal at 48 FR 36062, August 8, 1983) were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the Bahama swallowtail butterfly (*Heraclides andraemon bonhotei*) and Schaus swallowtail butterfly (*Heraclides aristodemus ponceanus*) are as follows.

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The Bahama swallowtail occurs throughout the Bahama Islands. There is no information indicating any threat to the species throughout its range.

Development for residential and recreational purposes threatens to modify or eliminate tropical hardwood forest hammocks on which the Schaus swallowtail depends. Uplands in the Florida Keys, though limited in area, are of much development interest due to the many wetland (mangrove) areas that are virtually impossible to develop. The entire range of this butterfly is vulnerable to modification or destruction from hurricanes. As the range of the species becomes increasingly limited and fragmented, the likelihood of a single hurricane destroying all or most of the remaining population increases.

B. *Overutilization for commercial, recreational, scientific or educational purposes.* Both the Bahama and Schaus swallowtail butterflies are popular with collectors. Although a few individuals of the Bahama swallowtail may occasionally be collected when this species appears in Florida, there is no information indicating that the species is threatened by overutilization in the Bahamas.

At the time of the listing of the Schaus swallowtail as a threatened species, some correspondents believed that collection of this species represented a threat. Since the species was listed, it has decreased in range and numbers. Collecting is now probably a greater threat than at the time of listing.

C. *Disease or predation.* Not applicable.

D. *The inadequacy of existing regulatory mechanisms.* This final rule removes the Bahama swallowtail butterfly from the protection of the Endangered Species Act. Federal listing as threatened and similar state listing under Chapter 39–27.04 of the Florida Administrative Code both provide regulatory protections for the Schaus swallowtail butterfly, but its population has generally declined, even subsequent to listing. Reclassification from threatened to endangered will benefit the Schaus swallowtail by giving increased priority to its recovery needs, pursuant to section 4(g)(4) of the Act, as amended.

E. *Other natural or manmade factors affecting its continued existence.* The Bahaman segment of the Bahama swallowtail populations provides it with insurance against the risk of extinction. The Schaus swallowtail could lose a significant portion of its remaining populations from hurricanes or frost. The range of this species has decreased substantially in recent decades. The present restricted range could be greatly reduced or eliminated by a single hurricane. The Schaus swallowtail is near the limits of its cold-tolerance in south Florida, and a single severe freeze could also greatly reduce the population.

Insecticide application may have adverse affects on the Schaus swallowtail. The Monroe County Mosquito Control District applies insecticides to control adult and larval mosquitoes. Both ground and aerial applications are made. The large amount of insecticides applied annually in Monroe County (4–5 thousand gallons of Dibrom and Baytex mixed with 50–60 thousand gallons of diesel fuel) could adversely affect the Schaus swallowtail as well as other insects native to the hardwood hammocks.

The Service has carefully assessed the best scientific information available regarding the past, present, and future threats faced by these species in determining to make this rule final. Based on this evaluation, the preferred action is to reclassify the Schaus swallowtail butterfly from threatened to endangered status and to remove the Bahama swallowtail butterfly from the U.S. List of Endangered and Threatened Wildlife. The Schaus swallowtail has declined since the time it was listed as threatened; the Bahama swallowtail no longer biologically or legally qualifies for the protection of the Endangered Species Act. The reason for not designating critical habitat for the Schaus swallowtail is discussed in the following section. A decision to take no action would leave both species in inappropriate status. Therefore, no action would be contrary to the Act's intent.

Critical Habitat

Section 4(a)(3) of the Endangered Species Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time any species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for the Schaus swallowtail butterfly. Section 4(b) of the Act requires publication of critical habitat maps in the **Federal Register.** Publication of critical habitat descriptions would make this species even more vulnerable to collecting and other pressures and would increase enforcement problems. Though taking prohibitions exist, effective enforcement is difficult, particularly outside Biscayne National Park. For these reasons, the recovery plan for the Schaus swallowtail butterfly expressly recommends that no publicity be given to the remaining colonies of this species. Therefore, it would not be prudent to determine critical habitat for the Schaus swallowtail butterfly at this time.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below. These conservation measures will no longer apply to the Bahama swallowtail butterfly.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 and are now under revision (see proposal at 48 FR 29990; June 9, 1983). Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species. If a Federal action may affect a listed species, the responsible Federal agency must enter into consultation with the Service. Since the Schaus swallowtail is already protected by section 7 of the Act by its listing as a threatened species, reclassifying the species to endangered will not affect this requirement.

The Act and its implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered

wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that had been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits my be issued to carry out otherwise prohibited activities involving endangered animal species under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship that would be suffered if such relief were not available.

A special rule (50 CFR 17.47(a), pursuant to section 4(d) of the Act) previously allowed non-commercial take of both the Bahama and Schaus swallowtail butterflies. These exemptions applied, however, only if concordant with State and local regulations and ordinances. Florida State law presently prohibits collecting these species except by permit, thus overriding the special rule.

This final rule removes all Federal protection for the Bahama swallowtail, and, by deleting the special rule for the Schaus swallowtail butterfly, brings existing Federal regulatory prohibitions into conformance with current State law. Few effects are anticipated from this change; the Bahama swallowtail is an occasional migrant to the U.S. and few specimens could be taken here. No additional effects are expected regarding the Schaus swallowtail, because take is already prohibited by State law except under permit.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined by the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

References

Loftus, W.F., and J.A. Kushlan. 1982. The status of the Schaus swallowtail and the Bahama swallowtail butterflies in Biscayne National Park. National Park Service, South Florida Research Center, Everglades National Park. Report M–649. 18 pp.

U.S. Fish and Wildlife Service. 1982. Schaus swallowtail butterfly recovery plan. U.S. Fish and Wildlife Service, Atlanta, Georgia. 57 pp.

Author

The primary author of this final rule is Dr. Michael M. Bentzien, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207 (904/791–2580 or FTS 946–2580). Dr. George E. Drewry of the Service's Washington Office served as editor.

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulations Promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter 1, Title 50 of the Code of Federal Regulations, is amended as set forth below:

1. The authority citation for Part 17 reads as follows:

Authority: Pub. L. 93–205, 87 Stat. 884; Pub. L. 94–359, 90 Stat. 911; Pub. L. 95–632, 92 Stat. 3751; Pub. L. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. Amend § 17.11(h) by changing the status of the Schaus swallowtail butterfly, under "INSECTS," from threatened to endangered; changing its scientific name, to reflect current usage, and revising the "special rules" column, as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
•	•	•	•	•	•		•
Insects:	•	•	•	•	•		•
Butterfly, Schaus swallowtail.	*Heraclides (Papilio) aristodemus ponceanus.*	U.S.A. (FL)	NA	E	13,159	NA	NA
•	•	•	•	•	•		•

3. Further amend § 17.11(h) by removing the Bahama Swallowtail butterfly *(Papilio andraemon bonhotei)*, under "INSECTS," from the list of Endangered and Threatened Wildlife.

§ 17.47 [Reserved]

4. Section 17.47 is removed and reserved.

Dated: August 14, 1984.

G. Ray Arnett,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 84–23157 Filed 8–30–84; 8:45 am]

BILLING CODE 4310–55–M

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50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Endangered Status for the Key Largo Woodrat and Key Largo Cotton Mouse

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines endangered status for the Key Largo woodrat and cotton mouse, two small mammals native to Key Largo, Monroe County, Florida. Destruction and alternation of tropical hardwood hammock forest, to which both species are restricted, is a threat to their continued existence. Both were listed as endangered by an emergency rule on September 21, 1983, but that rule expired on May 18, 1984. This final rule restores the protection of the Endangered Species Act of 1973, as amended.

DATES: The effective date of this rule is August 31, 1984 because the Service considers that the period between the expiration of the emergency rule covering the Key Largo woodrat and cotton mouse, and the implementation of this permanent final rule, should be as brief as possible because of the threats facing these species.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours (7:00 a.m.—4:30 p.m.) at the Service's Endangered Species Field Station, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Flordia 32207.

FOR FURTHER INFORMATION CONTACT: Mr. David J. Wesley, Endangered

Species Field Supervisor, at the above address (904/791–2580 or FTS 946–2580).

SUPPLEMENTARY INFORMATION:

Background

The Key Largo woodrat (*Neotoma floridana smalli*) was described by Sherman (1955). It is a small mammal, just over a foot in length including the haired tail, and the overall coloration is gray-brown above and white below. It is the southernmost subspecies of woodrat in the U.S., and is separated by a 150-mile gap from other Flordia woodrat (*N. f. floridana*) populations. The Key Largo cotton mouse (*Peromyscus gossypinus allapaticola*) was described by Schwartz (1952). It is about half as long as the woodrat, and its coloration is reddish brown above and white below. Both the woodrat and cotton mouse are endemic to Key Largo, Monroe County, Florida, and originally occurred throughout the hardwood hammocks on this Key, but have disappeared from most of their original range. Both species were introduced to Lignumvitae Key, Monroe County, Florida, in 1970. The woodrat may have reached the carrying capacity of the available habitat on this 90-hectare (220-acre) key, a State botanical site, but the status of the cotton mouse there is unknown. The Florida Department of Parks and Recreation had considered relocating the woodrat and cotton mouse from Lignumvitae Key, because neither species is native there. No such translocation efforts are presently planned, however.

The upland areas that the woodrat and cotton mouse inhabit on north Key Largo reach an elevation of about 4 meters (13 feet). The uplands support a rich biota, including many rare plant species. The climax vegetation type is a hardwood hammock forest with close floristic affinities to the West Indies. The hammocks are restricted to upland areas because they do not tolerate the intrusion of salt water in the tidal lowland areas.

Species associated with the north Key Largo hammocks include the Schaus swallowtail butterfly (*Papilio aristodemus ponceanus*), federally threatened; and several Florida State-listed plant species: tamarindillo (*Acacia choriophylla*), powdery catopsis (*Catopsis berteroniana*), prickly apple (*Cereus gracilis* var. *simpsonii*, a cactus which the Service presently has under review (48 FR 53647, November 28,1983) for possible listing as endangered or threatended), silver palm (*Coccothrinax argentata*) lignum-vitae (*Guaiacum sanctum*), inkwood (*Hypelate trifoliata*), mahogany mistletoe (*Phoradendron rubrum*), and brittle thatch palm (*Thrinax microcarpa*).

Tropical hardwood hammocks develop a closed canopy when they are mature, providing a more moderate, humid environment than the surrounding habitats. The Key Largo woodrat and cotton mouse are restricted to these hammocks. Tropical hardwood hammocks were originally found from Key West northward into the southern peninsula of Florida. Many of the hardwood hammocks on the peninsula, however, have been destroyed due to human activities. This habitat is one of the most limited and threatened ecosystems in Florida. The hammocks on north Key Largo represent some of the larges remaining tracts of this vegetation type. Based on work carried out on Key Largo from 1968 to 1973, Brown (1978) reported that the Key Largo woodrat had been extirpated by fires and development from the southern two-thirds of Key Largo.

Hersh (1981) studied the ecology of the woodrat on north Key Largo. Woodrat densities on a 5.25-hectare (13-acre) study area varied between 2 and 2.5 woodrats per hectare (0.8–1.0 woodrat per acre). Mean home range was 0.2368 hectares (0.6 acre). Each woodrat used several stick nests (about 5.6 nests per woodrat). Woodrats fed on leaves, buds, seeds, and flowers of a variety of plants.

Based on studies carried out on north Key Largo from January to August of 1979, Barbour and Humphrey (1982) found that the woodrat and cotton mouse were most abundant in mature hammocks and were rare or absent in young or recovering hammocks. Cotton mouse density was estimated to be 21.8 mice per hectare (8.8 per acre) in mature forest, but only 1.2 per hectare (0.5 per acre) in successional forest. About 463 hectares (1144 acres) on north Key Largo were occupied by woodrats. Stick nests were absent from two hammocks surveyed southwest of the U.S. 1–State Route 905 intersection. The total woodrat population on north Key Largo was estimated to be 654; the introduced population on Lignumvitae Key was estimated to be 85.

On May 19, 1980, Dr. Stephen R. Humphrey of the Florida State Museum, Gainesville, Florida, petitioned the Service to add the Key Largo woodrat and cotton mouse to the U.S. List of Endangered and Threatened Wildlife, pursuant to the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*). The petition included a status report prepared under contract to the Florida Game and Fresh Water Fish Commission. Portions of the report were recently published (Barbour and Humphrey 1982). In the **Federal Register** of July 28, 1980 (45 FR 49961–49962), the Service published a notice of petition acceptance and status review, and announced its intention to propose listing the two Key Largo rodents. In the **Federal Register** of December 30, 1982 (47 FR 58454–58460), these two mammals were included in category 1 of the Service's Review of Vertebrate Wildlife, meaning that there was sufficient information on hand to support the biological appropriateness of a listing proposal. In the **Federal Register** of September 21, 1983 (48 FR 43040–43043), the Service issued an emergency rule listing both species as endangered (for details, see below under "Available Conservation Measures"). The emergency rule expired on May 18, 1984. In the **Federal Register** of February 9, 1984 (49 FR 4951–4956), the Service published a proposed permanent determination of endangered status and critical habitat for the two species.

Summary of Comments and Recommendations

In the proposed rule of February 9, 1984, and associated notifications, all interested parties were requested to submit information that might contribute to the development of a final rule. Appropriate State and Federal agencies, county governments, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices, inviting public comment, were published in the *Miami Herald* on February 29, 1984, the *Marathon Keynoter* on March 1, 1984, and the *Key West Citizen* on March 2, 1984. On March 12, 1984, the Service received a request for a public hearing on the proposal. The hearing was held on April 24, 1984, in the Plantation Key Courthouse, Monroe County, Florida.

During the comment period, 62 comments were received. The hearing was attended by 118 persons; 33 individuals made oral statements, and 12 written statements were handed in. Official comment was received from the Florida Game and Fresh Water Fish Commission, which supported the proposal.

A large number of comments or oral statements either supported or opposed listing these species, but provided no substantive data. Support for the listing proposal was voiced by six environmental organizations. Opposition was generally received from landowners, attorneys representing landowners, realtors, and businesses. One individual also presented a petition

signed by 157 persons opposing the proposal.

The opposing comments received can be placed in a number of general groups, depending on content. These categories of comments, and the Service response to each, are listed below.

1. The Key Largo woodrat and/or cotton mouse should not receive the protection of the Endangered Species Act because rodents are pest species and have no intrinsic value to mankind. Some persons stated that Key Largo woodrats had invaded their homes.

Service response. Any species of native wildlife or plant (except a pest insect) is eligible, under the appropriate circumstances, for the protection of the Endangered Species Act. Economic value to mankind is not a factor that the Service may consider in determining whether to list endangered or threatened species. The Key Largo woodrat and cotton mouse are native rodents that generally avoid contact with humans. They have not been implicated in spreading disease to humans. The comments referring to rat problems appear to involve the black rat (*Rattus rattus*), an introduced pest species that is common in and around human dwellings in the Keys. The black rat also occurs in hardwood hammocks on north Key Largo (Hersh, 1981). The Service has no documented evidence of woodrats invading human dwellings.

2. Sufficient habitat for the conservation of the Key Largo woodrat and cotton mouse is included within areas scheduled for acquisition by the Federal (U.S. Fish and Wildlife Service) or Florida State (Department of Natural Resources) governments.

Service response. The Key Largo woodrat and cotton mouse have already disappeared from most of their original range. The scheduled acquisitions, if completed, would improve the potential for conserving the surviving populations, but would not eliminate the danger of extinction. As proposed, these acquisitions would include about 630 acres of hardwood hammocks supporting an estimated 318 woodrats, 49 percent of the total population of 654 woodrats estimated by Barbour and Humphrey (1982) for north Key Largo. At this time, acquisition of less than 150 acres of hammock has taken place. Fifty-one percent of the estimated total woodrat population on north Key Largo (336 woodrats) occurs in areas outside the proposed acquisition projects. These areas represent most of the highest density populations of the woodrat. Similar population percentages presumably apply to the cotton mouse. Although populations of both species would probably reach higher densities in the acquisition areas as hardwood hammocks matured, the most favorable habitat is now outside the acquisition projects.

Two commenters noted that Brown (1978) suggested that preservation of a few hundred acres of climax tropical hammock on north Key Largo would be sufficient to save the Key Largo woodrat and cotton mouse, and that, failing this, introduction of both species could be made to Old Rhodes Key or Elliott Key in Key Biscayne National Park. The Service believes that more than a few hundred acres of hardwood hammock would be required for the long-term survival and recovery of the Key Largo woodrat and cotton mouse. Transplanting is discussed below under "3." Although the Service provided part of the funding for the publication in which Dr. Brown's species accounts and recommendations appeared (See "Literature Cited," below), the contributors to the publication did not represent the Service or its policies, and the Service is not in any way restricted to the conservation recommendations made in the publication.

3. The Lignumvitae Key State Botanical Site, as well as potnetial introduction sites in Key Biscayne National Park (or elsewhere in the Florida Keys) could provide adequate habitat for the conservation of the Key Largo woodrat and cotton mouse, negating the need to list them.

Service response. The seemingly successful introduction of the Key Largo woodrat onto Lignumvitae Key indicates that this species might be able to colonize other hardwood hammocks in the upper Florida Keys. The principal hardwood hammocks remaining in the upper Keys, other than those on north Key Largo, are those of Key Biscayne National Part in Dade County. However, while transplantation to these areas may be a supplementary means of helping the species to survive, the Service must also act to preserve the ability of the species to exist in its current range. One of the primary purposes of the Endangered Species Act is to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved (16 U.S.C. 1531(b)). In accordance with this purpose, the Service 's policy is to attempt to conserve and recover endangered and threatened species within their known historic ranges. While transplantation of species may be a valuable conservation measure, it is not an acceptable procedure to preclude listing. Furthermore, any Service recovery efforts for these species could only take place if they were listed. Regardless of the merit of any transplantation proposals, the Service can commit Endangered Species Act funding and manpower only for the recovery of listed species. After a species is listed, the Service prepares a recovery plan; recovery activities could include, but would not ordinarily be restricted to, transplantation.

4. The Key Largo woodrat and cotton mouse are adequately protected by existing local, State, and Federal regulations (namely, designation of the Florida Keys as an Area of Critical State Concern, regulations affecting dredge and fill activities, customer service policies of the Florida Keys Aqueduct Authority, the Monroe County Land Clearing Ordinance, and rules in the Florida Administrative Code affecting John Pennekamp Coral Reef State Park).

Service response. Proposed principles for guiding development for the Florida Keys Area of Critical State Concern (Florida Statute § 380.0552) contain provisions for the protection of upland resources. The proposed principles, if adopted and rigorously enforced, would apparently provide considerable protection to hardwood hammocks. Designation of federally endangered and threatened species would aid in the recognition and preservation of such areas, however, and would not duplicate the development guidelines. The Service cannot at the present time predict what the final form of the principles for guiding development will be or assess the effectiveness of their enforcement. The Service cannot depend on these proposals to adequately protect the rodents. The Service does not believe the regulations affecting dredge and fill activities and John Pennekamp State Park provide any specific protection to the upland hardwood hammocks on north Key Largo. While the establishment of new access channels and marinas would increase the value of properties now lacking water access, the lack of such access does not mean these areas will be impractical to develop. Many "landlocked" properties on Key Largo have been intensively developed. The policies of the Florida Keys Aqueduct Authority, contrary to one comment received, do not exclude water delivery to all the hardwood hammocks of the Keys, but only to selected areas. The areas denied delivery on north Key Largo are nearly all within proposed Federal or State acquisition projects, mainly west of State Route 905. None of the above-mentioned regulations, either individually or in concert, duplicate the protection afforded endangered or threatened species by the Endangered Species Act.

5. The Key Largo woodrat and cotton mouse are not valid species or subspecies and are not native to Key Largo; they are, therefore, ineligible for the protection of the Endangered Species Act. Mr. Alan B. Maxwell, of Sea Critters, Inc., submitted that the Key Largo woodrat and cotton mouse were not valid subspecies because the woodrat could only be differentiated from mainland Florida populations by an internal (skull) character, and the cotton mouse was characterized by a trait (red pelage) also expressed to a lesser degree by cotton mice *(Peromyscus gossypinus palmarius)* from the southeastern Florida mainland. Mr. Maxwell indicated direct contact had taken place between the Key Largo cotton mouse and mainland forms of this species. He further stated that electrophoretic or immunological studies might confirm whether or not the Key Largo woodrat or cotton mouse are true subspecies. Mr. Maxwell also suggested that these species could be reared in captivity in any numbers desired and their survivability could be improved by hybridizing them with cotton mice and woodrats from mainland Florida.

Service response. The characters used to distinguish the Key Largo woodrat and cotton mouse are typical of anatomical features used in rodent taxonomy to recognize species or subspecies. While additional electrophoretic or immunological data might aid in understanding taxonomic relationships in these species, such data would not provide a definitive decision on whether or not the Key Largo woodrat and cotton mouse should be considered distinct subspecies. Though present-day contact between the Key Largo cotton mouse and mainland cotton mice is unlikely, the Key Largo cotton mouse was probably derived from the nearby mainland populations. Subspecies generally share many morphological characters, and intergrades between subspecies often cannot be identified to the subspecific level. This is the inevitable result of the fact that conspecific subspecies usually interbreed in areas of contact. While captive breeding is a possible Service recovery action, it is not a substitute for maintenance of sufficient populations of the species of concern in natural habitats. With regard to hybridization, it is against Service policy to hybridize listed species with other listed or nonlisted species (or subspecies). The Service has concluded that such hybridization can harm the chances of a species' survival and is not an acceptable conservation measure under the Endangered Species Act.

6. Dr. Earl R. Rich, a biologist retained by attorneys representing several landowners, proposed that the Key Largo woodrat was introduced to Key Largo by coastal trading vessels in the early part of the twentieth century, and that the introduced woodrat population was derived from north Florida, Georgia, or South Carolina populations of *Neotoma floridana floridana*. Dr. Rich concluded that morphometric study of coastal plain populations of *N. f. floridana* would be likely to show these populations to be more closely related to the Key Largo woodrat than are peninsular Florida populations.

Service response. The Florida Keys support many endemic mammal species or subspecies that are derived from mainland populations, but that diverged on the Keys. There is no evidence to suggest that woodrats did not colonize the Florida Keys in the same manner as the rest of the terrestrial vertebrate fauna there. Unlike the introduced black and Norway rats, woodrats are not human commensals and are not likely stowaways on ships. Sherman (1955) did examine some specimens of *Neotoma floridana* from the coastal plain of north Florida (New Berlin, Duval County), and they were less similar to the Key Largo woodrat than were some of the specimens taken farther to the south on the mainland peninsula (Gainesville and Gulf Hammock).

7. The Key Largo woodrat and cotton mouse are not qualified for the protection of the Endangered Species Act because they are not in danger of extinction throughout all or a significant portion of their range.

Service response. The Key Largo woodrat and cotton mouse have been largely or completely extirpated from their former range on Key Largo south of the U.S. 1—State Route 905 intersection. The Service's evaluation of potential future habitat destruction and development is discussed below under "Factors Affecting the Species."

8. Development is not imminent on north Key Largo; therefore there is no immediate need to list these species.

Service response. The Service agrees that imminent development appears less likely now than at the time it was petitioned to list these species. This is due to proposed Federal and State acquisition, a moratorium on the acceptance of new major development proposals in Monroe County, and Florida Keys Aqueduct Authority hookup policy. A slowdown in the demand for residential units on Key Largo has also apparently made immediate development less likely. Nonetheless, several projects have preliminary or final approval or are under construction in areas near to or within habitat of the Key Largo woodrat and cotton mouse. The Service assumes that in the foreseeable future north Key Largo will continue to be an area subject to development pressures. The final constraints on development in the area will depend on the Monroe County Land Use Plan, currently under revision. Additional details on development activities on north Key Largo and the need for Federal protection of these species are discussed below under "Summary of Factors Affecting the Species" and "Available Conservation Measures."

9. Development design and management criteria, rather than limiting the availability of utilities, would be a useful approach in minimizing impacts on the Key Largo woodrat and cotton mouse. The South Florida Regional Planning Council suggested that an example of this approach was the development order issued with respect to the Port Bougainville Development on north Key Largo.

Service response. The Service agrees that design of developments and management requirements could reduce the effects of development on the hardwood hammocks on which the Key Largo woodrat and cotton mouse depend. However, the Endangered Species Act does not give the Service any jurisdiction over such local or State planning. The Service's involvement is generally through Section 7 of the Endangered Species Act, affecting only Federal agencies. Federal participation, for example funding, often takes place long before specific development planning is carried out. After the Federal action has taken place, the Service would have no further jurisdiction over specific planning or management requirements for any development.

10. The Key Largo woodrat and cotton mouse occur much more widely in Monroe County, and therefore should not be listed.

Service response. Three comments indicated that woodrats occurred in areas from which they were not reported by Barbour and Humphrey (1982). These sites, each involving a few nests, were near or adjacent to occupied habitat documented by Barbour and Humphrey. No significant range extensions have been reported for either the Key Largo woodrat or cotton mouse.

11. The proposal of the Key Largo woodrat and cotton mouse as endangered species, with critical habitat, is a hasty bureaucratic measure. Insufficient time was available to allow

the presentation of additional scientific data.

Service response. All notification requirements of the Endangered Species Act regarding comment periods and hearings were met during the proposal of these species (see beginning of "Summary of Comments and Recommendations," above). Extensive notifications were also made following the emergency listing of September 21, 1983. The Service recognizes that the Key Largo woodrat and cotton mouse are not well known biologically, but such is often true of endangered and threatened species. Section 4(b)(1)(A) of the Endangered Species Act requires that listing decisions be made on the basis of the best *available* scientific and commercial data. Recovery measures may well include research on the ecology, distribution, and population dynamics of these species. The present scientific data available for the Key Largo woodrat and cotton mouse, however, indicate that they are endangered, in accordance with the five factors specified in section 4(a)(1) of the Act. This determination accords with the State of Florida, whose Game and Fresh Water Fish Commission has recognized these species as endangered.

12. Several comments specifically addressed the shape and size of the critical habitat for these species, or addressed potential economic effects of designating critical habitat.

Service response. These comments will be considered in a final regulation designating critical habitat for the Key Largo woodrat and cotton mouse (see "Critical Habitat," below).

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the Key Largo woodrat and the Key Largo cotton mouse should be classified as endangered species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; under revision to accommodate the 1982 Amendments to the Act—see proposal at 48 FR 36062, August 8, 1983) were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to the Key Largo woodrat (*Neotoma floridana smalli*) and the Key Largo cotton mouse (*Peromyscus gossypinus allapaticola*) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* The Key Largo woodrat and cotton mouse formerly occurred throughout the hardwood hammock forests of Key Largo, Monroe County, Florida (Schwartz, 1952; Sherman, 1955; Brown, 1978). These species are presently restricted to the northern portion of Key Largo, except for an introduced population of the woodrat (and possibly the cotton mouse) on Lignumvitae Key, Monroe County (Barbour and Humphrey, 1982). The area of Key Largo north of the U.S. 1—State Route intersection—is the site of the following ongoing or approved residential projects: under construction, Port Bougainville—2,806 units, Largo Beach and Tennis Club, 224 units; preliminary approval, Anchor Bay—159 units, Nichols Subdivision—22 units, Garden Cove—366 units; final approval, Carysfort Yacht Club—512 units (Status of Major Development Projects in Monroe County, Florida, Department of Community Affairs report, January 20, 1984). Approximately one-half of the Key Largo woodrat and cotton mouse habitat is contained in proposed Federal and State land acquisition projects, but only a small proportion of these areas has yet been acquired. If these acquisitions were completed, about 50 percent of Key Largo woodrat and cotton mouse populations would be protected. This would include only about 318 woodrats, however, based on the estimates of density provided by Barbour and Humphrey (1982). Most of the mature Key Largo hammocks with the highest woodrat and cotton mouse densities lie outside the proposed acquisition boundaries. The future of these areas will depend on planning decisions of Monroe County and the State of Florida, as well as the demand for residential and commercial development on north Key Largo. The Service believes that north Key Largo will continue to be an attractive area for residential development, even if such development is slowed by the present major development proposal moratorium, by current economic conditions, and by more restrictive local or State regulations.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* Not now known to be applicable.

C. *Disease or predation.* Not now known to be applicable.

D. *The inadequacy of existing regulatory mechanisms.* The proposed Federal and State acquisition projects on north Key Largo would provide protection to an estimated one-half of the surviving Key Largo woodrat and cotton mouse populations. Only a small proportion of the proposed upland areas has yet been acquired. Many of the acquisition areas are also denied access to fresh water by the customer service policies of the Florida Keys Aqueduct Authority (Sections 7.01 and 7.02). The principal protection for hardwood hammocks outside the proposed acquisition areas derives from section 18–23 of the Monroe County Code, which requires protection of tropical hardwood hammock communities to the maximum extent possible in the course of land clearing. The past application and enforcement of this ordinance has been largely ineffective in preserving hammocks, although individual trees may be saved. A proposed amendment of § 380.0552 of the Florida Statutes, Florida Keys Area as an Area of Critical State Concern, may, if adopted, increase the amount of protection given hardwood hammocks in the Keys. Permits for clearing small areas of hammock continue to be given by Monroe County, however. No existing regulations duplicate the protective and recovery provisions of the Endangered Species Act, as amended. The Act will impose conservation requirements on Federal agencies carrying out activities on north Key Largo, and requires the Service to develop a recovery plan for the Key Largo woodrat and cotton mouse (see "Available Conservation Measures"). The Key Largo woodrat and cotton mouse are considered endangered by the State of Florida (Administrative Code Chapter 39–27.03), but this statute does not protect the habitat of these species.

E. *Other natural or manmade factors effecting its continued existence.* The Key Largo woodrat may be at the carrying capacity of the available habitat on Lignumvitae Key. The status of the cotton mouse on this Key is unknown. The apparent extirpation of the Key Largo woodrat and cotton mouse from the southern portion of Key Largo indicates that these species are not tolerant of fragmented, highly disturbed hammocks.

The decision to determine endangered status for the Key Largo woodrat and cotton mouse was based on an assessment of the best available scientific information and of past, present, and probable future threats to these species. Because of the need to promptly publish these determinations, no determination of critical habitat can be made at this time. A decision to determine only threatened status would not be justified given the current low population levels, restricted range, and

potential jeopardy from habitat destruction of the Key Largo woodrat and cotton mouse. A decision to take no action would exclude both species from needed protection pursuant to the Endangered Species Act. Therefore, no action or listing as threatened would be contrary to the Act's intent.

Critical Habitat

Section 4(a)(3) of the Endangered Species Act, as amended, requires that "critical habitat" be designated, "to the maximum extent prudent and determinable," concurrent with the determination that a species is endangered or threatened. Section 4(b)(6)(C) further indicates that a concurrent critical habitat determination is not required if the Service finds that a prompt determination of endangered or threatened status is essential to the conservation of the involved species.

In the case of the Key Largo woodrat and cotton mouse, the Service believes that a prompt determination of endangered status is essential. An emergency listing of both species as endangered was published in the **Federal Register** on September 21, 1983 (48 FR 43040–43043), but expired on May 18, 1984. A permanent final determination of endangered status is now necessary to restore the appropriate legal classifications, to provide the protection of the Act, and to maintain the effectiveness of a relevant biological opinion issued by the Service pursuant to section 7. This opinion is that a loan by the Rural Electrification Administration (REA), for the financing of increased electrical delivery on north Key Largo by the Florida Keys Electric Cooperative (FKEC) would result in development that would jeopardize the survival of the two species. If the Key Largo woodrat and cotton mouse were only proposed, but not listed, they would be eligible only for the consideration given under the conference requirement of section 7(a)(4) of the Act, as amended. This does not require a limitation on the commitment of resources on the part of the concerned Federal agency. Therefore, in order to ensure that the full benefits of section 7 will apply to the Key Largo woodrat and cotton mouse, prompt determination of endangered status is essential. The Service is, however, currently performing the economic and other impact analyses required for a determination of critical habitat for the two species, and does plan to make such a determination in the near future.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened pursuant to the Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 and are now under revision (see proposal in **Federal Register** of June 29, 1983, 48 FR 29990). Section 7 requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species. If a Federal action may affect a listed species or critical habitat, the responsible Federal agency must enter into consultation with the Service.

On June 27, 1983, the Service entered into formal section 7 consultation with REA concerning financing of an electric substation and system expansion by the FKEC. The system expansion would potentially allow about 6,000 more electric drops in the north Key Largo area. The Key Largo woodrat and cotton mouse were listed by an emergency rule on September 21, 1983, to allow them to be considered in the consultation, which also dealt with the federally endangered American crocodile and the federally threatened Schaus swallowtail butterfly. On October 27, 1983, the Service's Regional Director in Atlanta, Georgia, issued a biological opinion concerning the American crocodile, the Schaus swallowtail butterfly, and the Key Largo woodrat and cotton mouse. The opinion indicated that the construction of the substation would not jeopardize any listed species, but expansion of the electric delivery capability would facilitate development that would jeopardize the continued survival of the Key Largo woodrat and cotton mouse. The REA has not yet responded to the Service's findings and recommendations in the October 27, biological opinion. Restoration of protection for these species pursuant to section 7 of the Endangered Species Act will assure that they are considered in REA's formulation of loan conditions relating to increased electrical delivery on north Key Largo.

A previous Service consultation pursuant to section 7 of the Endangered Species Act occurred in relation to the Farmers Home Administration (FmHA) funding of the Florida Keys Aqueduct Authority's new aqueduct in the Florida Keys. The Service's concern was that the new pipeline would facilitate development, thereby adversely affecting listed species. FmHA entered into consultation with the Fish and Wildlife Service on February 4, 1980. The consultation involved one endangered species, the American crocodile, and one threatened species, the Schaus swallowtail butterfly, on north Key Largo. A biological opinion issued by the Service on May 29, 1980, indicated that these species would be jeopardized by the project. FmHA agreed to condition its loan to restrict water delivery on north Key Largo, thus avoiding a violation of section 7(a)(2) of the Endangered Species Act. The areas thus excluded from water delivery were within the proposed boundaries of the Crocodile Lake National Wildlife Refuge as well as uplands of several sections of land east of the refuge. About 45 percent of the total Key Largo woodrat and cotton mouse population on north Key Largo occurs in hammocks as a result of the existing biological opinion. Much of the densely occupied habitat, however, lies outside these areas. Since the FmHA is not involved with the construction and operation of the pipeline, no future Federal involvement with this project is anticipated. Because of the high-cost nature of housing development anticipated for north Key Largo, other Federal subsidies are not likely in this area.

The Act and its implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of a commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It also is illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that had been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving endangered animal species under certain circumstances. Regulations governing permits are at 50 CFR 17.22 and 17.23. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship that would be suffered if such relief were not available.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined by the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

Literature Cited

Barbour, D.B., and S.R. Humphrey. 1982. Status and habitat of the Key Largo woodrat and cotton mouse (*Neotoma floridana smalli* and *Peromyscus gossypinus allapaticola*). J. Mamm. 63:144–148.

Brown, L.N. 1978. Key Largo cotton mouse; Key Largo woodrat. *In* Layne, J.N. (ed.), Rare and endangered biota of Florida, Vol. I, Mammals, Florida Game and Fresh Water Fish Comm. pp. 10–12

Hersh, S.L. 1981. Ecology of the Key Largo woodrat (*Neotoma floridana smalli*). J. Mamm. 62:201–206.

Schwartz, A. 1952. Three new mammals from southern Florida. J. Mamm. 33:381–385.

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Author

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List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulations Promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

1. The authority citation for Part 17 reads as follows:

Authority: Pub. L. 93–205, 87 Stat. 884; Pub. L. 94–359, 90 Stat. 911; Pub. L. 95–632, 92 Stat. 3751; Pub. L. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. Section 17.11(h) is amended by adding the following two entries, in alphabetical order, to the List of Endangered and Threatened Wildlife under "MAMMALS:"

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
Mammals							
*	*	*	*	*	*		
Mouse, Key Largo cotton	*Peromyscus gossypinus allapaticola*	U.S.A. (FL)	Entire	E	131E, 160	NA	NA
*	*	*	*	*	*		
Woodrat, Key Largo	*Neotoma floridana smalli*	U.S.A. (FL)	Entire	E	131E, 160	NA	NA
*	*	*	*	*	*		

Dated: August 7, 1984.

G. Ray Arnett,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 84-23158 Filed 8-30-84; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 285

[Docket No. 40441-4076]

Atlantic Tuna Fisheries

Correction

In FR Doc. 84-19552 beginning on page 29796 in the issue of Tuesday, July 24, 1984, make the following corrections:

1. On page 29798, second column, paragraph 2., first line, "Trade" should have read "Table".

§ 285.31 [Corrected]

2. On page 29800, in § 285.31(cc), first column, third line, "§ 385.33" should have read "§ 285.33".

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